Air Transport Association of America, Inc. · Aircraft Owners and Pilots Association American Airlines American Congress on Surveying and Mapping American Medical Response Inc. ARINC
ARRL, The National Association for Amateur Radio Astrolink International LLC AT&T Wireless Services, Inc. Delta Air Lines, Inc. eRide, Inc. Ellipso. Inc. Ericsson Inc. Garmin International, Inc. General Aviation Manufacturers Association Global Locate, Inc. IntergriNautics Corporation · LocatorNet Magellan Corporation · National Business Aviation Association National Ocean Industries Association · NavCom Technology, Inc. Nokia, Inc. · Nortel Networks, Inc. · NovAtel Inc. · Omnistar, Inc. Outreach · QUALCOMM Incorporated. · Rockwell Collins, Inc. Satellite Industry Association · SiRF Technology · Sirius Satellite Radio CEIVED Spatial Technologies Industry Association Tendler Cellular, Inc. JUL - 6 2001 Trimble Navigation Ltd. · United Airlines US GPS Industry Council · WorldCom, Inc. · XM Radio Inc.

PHICE OF THE SECRETARY

July 6, 2001

The Honorable Donald H. Rumsfeld Secretary of Defense Department of Defense The Pentagon Washington, D.C. 20301

Reference:

Pending FCC Rule-making (ET Docket 98-153) on a Fast-Track

Subject:

Request for Unified Administration Position on FCC UWB Rule-Making

Dear Secretary Rumsfeld:

The Signatories listed above bring to your attention the following joint comments on the national policy consequences for national security, public safety, and the economy that will be imminently decided in the above proceeding.

The Federal Communications Commission (FCC) is considering a rule to allow emerging ultra-wideband (UWB) transmitters and networks to operate on an unlicensed basis under Part 15 of its rules governing consumer devices. Since UWB devices send pulses of energy across extremely wide sections of radio spectrum, this pending rule could allow UWB operations to overlay all existing systems and services operating in 1 to 6 GHz. Most importantly, this spectrum sharing proposes a historic rule change to remove the prohibition on intentional transmissions into and across restricted frequency bands, including those used by defense, safety-of-life services, and the Global Positioning System (GPS). These restrictions have proven fundamental to slowing the rise of the noise floor in restricted bands and protecting our strategic military advantage, particularly for space-based systems. A rising noise floor would also undermine the commercial utility of spectrum allocated to existing services thereby affecting large segments of the information economy.

No. of Copies rec'd 0+4 List A B C D E As a preliminary matter, many of the entities listed on this letterhead have filed separate comments with the FCC, reflecting individual interests. However, all the Signatories to this letter share certain fundamental principles and conclusions. These are as follows:

FIRST, ultra-wideband (UWB) devices may offer a promising technology that could provide new and innovative services. However, the FCC has received extensive comments on a broad range of interference test results by the National Telecommunications Administration (NTIA), Department of Transportation (DoT), universities, and industry that demonstrate that such devices have unique, intentional transmission characteristics that cause significant harmful interference to GPS, other safety-of-life services, wireless services, such as Personal Communication Services (PCS), and to satellite services such as Digital Audio Radio Services (DARS). Test results show adverse interference effects from UWB devices to existing services at power levels substantially below Part 15 levels. The potential for disruption increases with the unlicensed deployment of large scale, overlapping communication networks. Consequently, the Signatories recommend that UWB devices be limited to spectrum above 6 GHz, and below 1 GHz for UWB ground penetrating radars (GPRs), not be allowed to operate in any restricted band, including safety-of-life service bands, and be subject to a licensing regime.

SECOND, an FCC rule-making that broadly affects the economy, national security, and public safety must ensure that implementation is practical to effectively meet enduring national policy needs, including:

- (i) secure spectrum for evolving national security needs and military options, including GPS and satellite communications:
- (ii) the safety of the spectrum foundation of all transportation modes and of the National Airspace (NAS), including bands restricted for safety-of-life services and GPS;
- (iii) the commercial utility of spectrum allocated to existing services requiring a stable noise floor:
- (iv) free spectrum for the safe introduction of UWB devices and networks in an appropriate band segment.

THIRD, The absence of a unified Administration position at the highest policy levels may result in a short-sighted compromise allowing spectrum sharing on an unlicensed basis, under the pretext that a narrow emission mask in practice protects existing services. This would create major risks to national security, and damage the economy. For example—as proposed by some UWB proponents* --a rule that uses emission masks to allow unlicensed UWB operations to overlay existing services in 1 to 6 GHz will not prove practical or safe for the following reasons:

- (i) an emission mask, whether on a licensed or unlicensed basis, will not address the interference resulting from harmful frequency shifts caused by antenna distortion on simple UWB consumer devices;
- (ii) the commercial opportunities for UWB are in large-scale communications networks and wireless mobile connectivity to the Internet, but narrow emission masks are not a practical solution to allowing such UWB use in shared spectrum because such masks

do not allow enough power for high data rate communications networks; this will result in immediate commercial pressure to erode these emission masks.

In light of the above, the Signatories respectfully request that the Department of Defense convey our policy and technical concerns to Secretary Evans and the NTIA, respectively. We further request that your agency actively work with the other agencies concerned, including the Departments of Transportation and Commerce, and NASA, to support the formation of a unified Administration position and communicate this to the Chairman of the FCC as soon as possible. We believe that this position needs to include maintaining current Part 15 restrictions and finding a way forward for the safe introduction of UWB at higher frequencies. We also believe that the Commission should issue a second NPRM which responds to our concerns and includes all the details of its proposed action.

The Signatories stand ready to actively support you, Mr. Secretary, and the Administration, in this endeavor. To this end, we are respectfully requesting a meeting with you to discuss these matters.

Respectfully submitted,

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^{*} Comments filed by Xtreme Spectrum under ET Docket 98-153 on April 25, 2001 and in a presentation to the FCC on May 30, 2001